SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Tactical Combat Casualty Care November 2010 Care Under Fire	Tactical Combat Casualty Care November 2010 Care Under Fire	First phase of TCCC is Care Under Fire.
Objectives DESCRIBE the role of fire superiority in the management of combat trauma. DEMONSTRATE techniques that can be used to quickly move casualties to cover while the unit is engaged in a firefight EXPLAIN the rationale for early use of a tourniquet to control life-threatening extremity bleeding during Care Under Fire.	Objectives • DESCRIBE the role of fire superiority in the management of combat trauma. • DEMONSTRATE techniques that can be used to quickly move casualties to cover while the unit is engaged in a firefight • EXPLAIN the rationale for early use of a tourniquet to control life-threatening extremity bleeding during Care Under Fire.	Read objectives.
Objectives DEMONSTRATE the appropriate application of the Combat Application Tourniquet to the arm and leg EXPLAIN why immobilization of the cervical spine is not a critical need in combat casualties with penetrating trauma to the neck.	Objectives • DEMONSTRATE the appropriate application of the Combat Application Tourniquet to the arm and leg • EXPLAIN why immobilization of the cervical spine is not a critical need in combat casualties with penetrating trauma to the neck.	Read objectives.
Care Under Fire Guidelines 1. Return fire and take cover. 2. Direct or expect casualty to remain engaged as a combatant if appropriate. 3. Direct casualty to move to cover and apply self-aid if able. 4. Try to keep the casualty from sustaining additional wounds.	Care Under Fire Guidelines 1. Return fire and take cover. 2. Direct or expect casualty to remain engaged as a combatant if appropriate. 3. Direct casualty to move to cover and apply self-aid if able. 4. Try to keep the casualty from sustaining additional wounds.	Read the CUF guidelines. Note that the guidelines shown here will be published in the SEVENTH Edition of the PHTLS Manual. These guidelines are different from those in the Sixth Edition of PHTLS, which is the edition currently in publication.

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Care Under Fire Guidelines 5. Casualties should be extricated from burning vehicles or buildings and moved to places of relative safety. Do what is necessary to stop the burning process. 6. Airway management is generally best deferred until the Tactical Field Care phase	Care Under Fire Guidelines 5. Casualties should be extricated from burning vehicles or buildings and moved to places of relative safety. Do what is necessary to stop the burning process. 6. Airway management is generally best deferred until the Tactical Field Care phase	Read the CUF Guidelines
Care Under Fire Guidelines 7. Stop life-threatening external hemorrhage if tactically feasible: - Direct casualty to control hemorrhage by selfaid if able. - Use a CoTCCC-recommended tourniquet for hemorrhage that is anatomically amenable to tourniquet application. - Apply the tourniquet proximal to the bleeding site, over the uniform, tighten, and move the casualty to cover.	Care Under Fire Guidelines 7. Stop <i>life-threatening</i> external hemorrhage if tactically feasible: • Direct casualty to control hemorrhage by self-aid if able. • Use a CoTCCC-recommended tourniquet for hemorrhage that is anatomically amenable to tourniquet application. • Apply the tourniquet proximal to the bleeding site, over the uniform, tighten, and move the casualty to cover.	Read the CUF Guidelines
Care Under Fire • Prosecuting the mission and caring for the casualties may be in direct conflict. • What's best for the casualty may NOT be what's best for the mission. • When there is conflict – which takes precedence? • Scenario dependent • Consider the following example	 Care Under Fire Prosecuting the mission and caring for the casualties may be in direct conflict. What's best for the casualty may NOT be what's best for the mission. When there is conflict – which takes precedence? Scenario dependent Consider the following example 	In the hospital, the casualty IS the mission. In TCCC, you have the casualty AND the mission.
SPEC OPS Operations of the second of the se		The scenario described here was Special Ops. The PRINCIPLES discussed apply to all combat units. Go over each slide – draw the audience in.

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Raid on Entebbe by VADM Bill McRaven 27 June 1976 Air France Flight 139 hijacked Flown to Entebbe (Uganda) 106 hostages held in Old Terminal at airport 7 terrorists guarding hostages 100 Ugandan troops perimeter security Israeli commando rescue	Raid on Entebbe by VADM Bill McRaven • 27 June 1976 • Air France Flight 139 hijacked • Flown to Entebbe (Uganda) • 106 hostages held in Old Terminal at airport • 7 terrorists guarding hostages • 100 Ugandan troops perimeter security • Israeli commando rescue	One of the most famous hostage situations in history.
Raid on Entebbe by VADM Bill McRaven Rescue 4 July 1976 • Exit from C-130 in a Mercedes and 2 Land Rovers to mimic mode of travel of Idi Amin – the Ugandan dictator at the time • Dressed as Ugandan soldiers • Drove up to the terminal - shot the Ugandan sentry • Assaulted the terminal through 3 doors	Raid on Entebbe by VADM Bill McRaven Rescue 4 July 1976 • Exit from C-130 in a Mercedes and 2 Land Rovers to mimic mode of travel of Idi Amin – the Ugandan dictator at the time. • Dressed as Ugandan soldiers • Drove up to the terminal - shot the Ugandan sentry • Assaulted the terminal through 3 doors	The tactics used were genius. DECEPTION, SURPRISE, and VIOLENCE
DESTRIBUTED STATE STATES	Raid on Entebbe by VADM Bill McRaven	Here's what the layout looked like. Black arrows show the entry paths of the Israeli commandos.
Raid on Entebbe by VADM Bill McRaven • LTC Netanyahu – the ground commander – shot in chest at the beginning of the assault • What should the corpsman or medic do? • Disengage from the assault? - Start an IV? • Immediate needle decompression of chest?	Raid on Entebbe by VADM Bill McRaven • LTC Netanyahu – the ground commander – shot in chest at the beginning of the assault • What should the corpsman or medic do? • Disengage from the assault? • Start an IV? • Immediate needle decompression of chest?	Imagine YOU are the combat medic on this operation. What would you do now? Ask several people in the audience what THEY would do. Note that this LTC Netanyahu was the brother of the future Prime Minister of Israel.

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Raid on Entebbe by VADM Bill McRaven As previously ordered, the three assault elements disregarded Netanyahu and stormed the building." "At this point in the operation, there wasn't time to attend to the wounded."	Raid on Entebbe by VADM Bill McRaven As previously ordered, the three assault elements disregarded Netanyahu and stormed the building." "At this point in the operation, there wasn't time to attend to the wounded."	NO medical care at the moment. Have to establish control of the tactical situation first.
Do seconds really matter in combat?	Do seconds really matter in combat?	LTC Netanyahu died from his wounds. The assault phase of the operation took 90 seconds. Did the 90-second treatment delay affect his chances of survival? Probably not. Would a 90-second delay in continuing the assault phase of the operation have made a difference? Absolutely.
Ma'a lot Rescue Attempt by VADM Bill McRaven 15 May 1974 3 PLO terrorists take 105 hostages Schoolchildren and teachers When assault commenced, terrorists began killing hostages 22 children killed, 56 wounded The difference between a dramatic success and a disaster may be measured in seconds.	 Ma'a lot Rescue Attempt by VADM Bill McRaven 15 May 1974 3 PLO terrorists take 105 hostages Schoolchildren and teachers When assault commenced, terrorists began killing hostages 22 children killed, 56 wounded The difference between a dramatic success and a disaster may be measured in seconds. 	Look what even a momentary delay can mean to a hostage rescue operation OR OTHER TACTICAL ENGAGEMENTS
Care Under Fire • If the firefight is ongoing - don't try to treat your casualty in the Kill Zone! • Suppression of enemy fire and moving casualties to cover are the major concerns.	 Care Under Fire If the firefight is ongoing - don't try to treat your casualty in the Kill Zone! Suppression of enemy fire and moving casualties to cover are the major concerns 	Not every casualty scenario is a hostage rescue, but these basic principles apply.

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Care Under Fire Suppression of hostile fire will minimize the risk of both new casualties and additional injuries to the existing casualties. The firepower contributed by medical personnel and the casualties themselves may be essential to tactical fire superiority. The best medicine on the battlefield is fire superiority.	 Care Under Fire Suppression of hostile fire will minimize the risk of both new casualties and additional injuries to the existing casualties. The firepower contributed by medical personnel and the casualties themselves may be essential to tactical fire superiority. The best medicine on the battlefield is fire superiority. 	Sustaining a minor wound in a firefight does not mean that you should disengage from the fight.
Moving Casualties in CUF If a casualty is able to move to cover, he should do so to avoid exposing others to enemy fire. If casualty is unable to move and unresponsive, the casualty is likely beyond help and moving him while under fire may not be worth the risk. If a casualty is responsive but can't move, a rescue plan should be devised if tactically feasible. Next sequence of slides shows the hazards of moving casualties before hostile fire is suppressed.	 Moving Casualties in CUF If a casualty is able to move to cover, he should do so to avoid exposing others to enemy fire. If casualty is unable to move and unresponsive, the casualty is likely beyond help and moving him while under fire may not be worth the risk. If a casualty is responsive but can't move, a rescue plan should be devised if tactically feasible. Next sequence of slides shows the hazards of moving casualties before hostile fire is suppressed. 	Unit members should be TRAINED to move themselves to point of first cover if able. Don't put two people at risk if avoidable.
1) White under free and writeset a topologic free and writeset a topologic formers, See Ry, and Shane mains to Sig. Loron: Wells to goal han to unify during the SMC combat operations in Pallugah.	While under fire and without a weapon, Gunnery Sgt. Ryan P. Shane runs to Sgt. Lonnie Wells, to pull him to safety during USMC combat operations in Fallujah.	Here is a dramatic example of casualty movement during Care Under Fire Read text
20 3) Gramery for Shame attempts to pull a fairly wounded Spt Wells as over	Gunnery Sgt Shane attempts to pull a fatally wounded Sgt Wells to cover.	Read text

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
2) Another Marine cames to help.	Another Marine comes to help.	Read text
4) Gunnery Sgt. Shane (1ett) is hit by enemy fire.	Gunnery Sgt. Shane (left) is hit by enemy fire.	Read text
S) The anidentified Marine beads for cover after Gaussers Sg Shanic on ground at left, was hit by finus gent sinjer fire.	The unidentified Marine heads for cover after Gunnery Sgt Shane, on ground at left, was hit by insurgent sniper fire.	Read text
Casualty Movement Rescue Plan If you must move a casualty under fire, consider the following: - Location of nearest cover - How best to move him to the cover - The risk to the rescuers - Weight of casualty and rescuer - Distance to be covered - Use suppression fire and smoke to best advantage! - Recover weapon if possible	Casualty Movement Rescue Plan If you must move a casualty under fire, consider the following: • Location of nearest cover • How best to move him to the cover • The risk to the rescuers • Weight of casualty and rescuer • Distance to be covered • Use suppression fire and smoke to best advantage! • Recover weapon if possible	DON'T FORGET COVERING FIRE! If possible, let the casualty know what you plan.

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Types of Carries for Care Under Fire One-person drag with/without line Two-person drag with/without line SEAL Team Three Carry Hawes Carry	Types of Carries for Care Under Fire • One-person drag with/without line • Two-person drag with/without line • SEAL Team Three Carry • Hawes Carry	Read text.
One-Person Drag Advantage: No equipment required Only one researe reposed to fire Disadvantages: Relatively show Not optimal body position for dragging the casualty	One-Person Drag Advantages No equipment required Only one rescuer exposed to fire Disadvantages Relatively slow Not optimal body position for dragging the casualty	Read text Have other Instructors or students demonstrate
Two-Person Drag Two-Person Drag Advantage: Gets cassally to cover faster than with one-person drag Disadvantager: Exposes two researcs to hostlik fire instead of one	Two-Person Drag Advantage Gets casualty to cover faster than with one-person drag Disadvantage Exposes two rescuers to hostile fire instead of one	Read text Have other Instructors or students demonstrate
Video: Two-Person Drag Click in box to start – no sound	Video: Two-Person Drag	Play video

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Two-Person Drag Using Lines	Two-Person Drag Using Lines	Have other Instructors or students demonstrate Advantage • can shoot while dragging • faster than dragging without lines • faster movement of the casualty to cover Disadvantage • exposes two rescuers to hostile fire instead of one
SEAL Team Three Carry Advantages: - May be useful in situations where drags do not work well - Less painful for casually than dragging Disadvantages: - Expose two rescuers to bottle fire - May be aloner than dragging - May be difficult in hit and with unconscious casually.	SEAL Team Three Carry	Have other Instructors or students demonstrate Advantage May be useful in situations where drags do not work well Less painful for casualty than dragging Disadvantages Exposes two rescuers to hostile fire May be slower than dragging May be difficult in kit and with unconscious casualty.
SEAL Team Three Carry (2) • Arms around shoulders of both rescuers • Casualty uses arms to hold onto rescuers if able • Rescuers hold casualty's arms around necks if casualty not able to • Both rescuers grab casualty's web belt • Lift and go	SEAL Team Three Carry (2)	Arms around shoulders of both rescuers Casualty uses arms to hold onto rescuers if able. Rescuers hold casualty's arms around necks if casualty not able to. Both rescuers grab casualty's web belt Lift and go

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
32	Hawes Carry	Read text
Hawes Carry	Technique: Rescuer squats; arms around neck; lift with legs Advantages: -One rescuer -May be useful in situations where a drag is not a good option -Works much better than outdated fireman's carry Disadvantages: -Hard to accomplish with rescuer and/or casualty's kit in place -Difficult when rescuer is small and casualty is large -Often slower than dragging -High profile for both rescuer and casualty	Have other Instructors or students demonstrate
Carries Practical How Not to Do It	Carries Practical	This is a good example of how NOT to carry your casualty For practical exercise: Break up into groups of 6 or less students per instructor Use skill sheets in the TCCC curriculum that apply to each practical exercise
Burn Prevention in CUF Remove from burning vehicles or structures ASAP and move to cover Stop burning with any non-flammable fluids readily accessible, smothering, or rolling on ground	Burn Prevention in CUF • Remove from burning vehicles or structures ASAP and move to cover • Stop burning with any non-flammable fluids readily accessible, smothering, or rolling on ground	If can't put out burning clothes due to petroleum products, may have to cut garments off

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Burn Prevention in CUF Wear fire-retardant Nomex gloves and uniform! Right hand of burn casualty spared by fire-resistant glove Fire-Resistant Army Combat Shirt spared by fire-resistant glove	Burn Prevention in CUF • Wear fire-retardant Nomex gloves and uniform Right hand of burn casualty spared by fire-resistant glove Fire-Resistant Army Combat Shirt	Flame-resistant clothing can protect you from burn injuries. Your unit needs these clothing items if you don't have them already.
The Number One Medical Priority Early control of severe hemorrhage is critical. - Extremity hemorrhage is the most frequent cause of preventable battlefield deaths. - Over 2500 deaths occurred in Vietnam as a result of hemorrhage from extremity wounds. - Injury to a major vessel can quickly lead to shock and death. - Only life-threatening bleeding warrams intervention during Care Under Fire.	 The Number One Medical Priority Early control of severe hemorrhage is critical. Extremity hemorrhage is the most frequent cause of preventable battlefield deaths. Over 2500 deaths occurred in Vietnam as a result of hemorrhage from extremity wounds. Injury to a major vessel can quickly lead to shock and death. Only life-threatening bleeding warrants intervention during Care Under Fire. 	If you can only do ONE thing for the casualty – stop him from bleeding to death. Do not treat minor bleeding during Care Under Fire.
Ouestion • How long does it take to bleed to death from a complete femoral artery and vein disruption? • Answer: - Casualties with such an injury can bleed to death in as little as 3 minutes	 Question How long does it take to bleed to death from a complete femoral artery and vein disruption? Answer: Casualties with such an injury can bleed to death in as little as 3 minutes 	10% of animals in lab studies died within 3 minutes without hemorrhage control measures.
Femoral Artery Bleeding	Femoral Artery Bleeding	Click on picture to play video This is FEMORAL ARTERTY bleeding in a pig. It does not take long to die from this. This video was shown earlier – it is shown here again to emphasize need for IMMEDIATE action with this kind of bleeding

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Care Under Fire The need for immediate access to a tourniquet in such situations makes it clear that all personnel on combat missions should have a CoTCCC-recommended tourniquet readily available at a standard location on their battle gear and be trained in its use. - Casualties should be able to easily and quickly reach their own tourniquet.	Care Under Fire The need for immediate access to a tourniquet in such situations makes it clear that all personnel on combat missions should have a Combat Application Tourniquet readily available at a standard location on their battle gear and be trained in its use. • Casualties should be able to easily and quickly reach their own tourniquet.	DO NOT bury your tourniquet at the bottom of your pack.
Care Under Fire Where a tourniquet can be applied, it is the first choice for hemorrhage control in Care Under Fire.	Care Under Fire Where a tourniquet can be applied, it is the first choice for hemorrhage control in Care Under Fire.	Forget about direct pressure, pressure dressings or anything else if you have severe extremity bleeding in the Care Under Fire phase. Go directly to a tourniquet.
A Survivable Wound Did not have an effective tourniquet applied - bled to death from a leg wound	A Survivable Wound Did not have an effective tourniquet applied - bled to death from a leg wound	The medic in this Army unit was killed in the battle in which this soldier was wounded. Others in the unit attempted to control the bleeding from this soldier's wound just below his left knee. These improvised tourniquets were ineffective, and the Soldier bled to death. DON''T LET THIS HAPPEN TO YOUR BUDDIES!

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Tourniquet Application Apply without delay if indicated Both the casualty and the medic are in grave danger while a tourniquet is being applied in this phase – don't use tourniquets for wounds without significant bleeding The decision regarding the relative risk of further injury versus that of bleeding to death must be made by the person rendering care.	 Tourniquet Application Apply without delay if indicated Both the casualty and the medic are in grave danger while a tourniquet is being applied in this phase-don't use tourniquets for wounds without significant bleeding The decision regarding the relative risk of further injury versus that of bleeding to death must be made by the person rendering care. 	Read text
Tourniquet Application Non-life-threatening bleeding should be ignored until the Tactical Field Care phase. Apply the tourniquet without removing the uniform—make sure it is clearly proximal to the bleeding site. Tighten until bleeding is controlled. May need a second tourniquet applied just above the first to control bleeding. Don't put a tourniquet directly over the knee or elbow. Don'tput a tourniquet directly over a holster or a cargo pocket that contains bulky items.	 Tourniquet Application Non-life-threatening bleeding should be ignored until the Tactical Field Care phase. Apply the tourniquet without removing the uniform – make sure it is clearly proximal to the bleeding site. Tighten until bleeding is controlled. May need a second tourniquet applied just above the first to control bleeding. Don't put a tourniquet directly over the knee or elbow. Don't put a tourniquet directly over a holster or a cargo pocket that contains bulky items. 	Here are some key points about applying a tourniquet.

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Anatomy of a C-A-TTM Wordings Self-Adhering Band Windings Clap The Combat Application Tourniquet Pending) is a small and lightweight one-handed tourniquet that completely occludes arterial blood flow in an extremity.	Anatomy of a C-A-T TM The Combat Application Tourniquet TM (C-A-T TM) (Patent Pending) is a small and lightweight one-handed tourniquet that completely occludes arterial blood flow in an extremity.	The C-A-T TM uses a Self-Adhering Band and a Friction Adaptor Buckle to fit a wide range of extremities, combined with a one-handed windlass system. The windlass uses a freely moving internal band to provide true circumferential pressure to an extremity. The Windlass Rod is then locked in place (this requires only one hand) with the Windlass Clip TM . The C-A-T TM also has a Hook-and-Loop Windlass Strap TM to further secure the windlass during patient transport.
Combat Application Tourniquet ® (Pat. Pending) The C-A-T ^{ru} is Delivered in Its One-Handed Configuration Free-running end of the Self-Adhering Band passed through the buckle forming a loop for the arm to pass through. This is the recommended carrying configuration.	Combat Application Tourniquet ® The C-A-T TM is Delivered in Its One-Handed Configuration • Free-running end of the Self- Adhering Band passed through the buckle forming a loop for the arm to pass through. This is the recommended carrying configuration	Read text
One-Handed Application to Arm Step 1: Insert the wounded extremity through the loop of the Self-Adhering Band.	One-Handed Application to Arm Step 1: Insert the wounded extremity through the loop of the Self-Adhering Band.	Have another instructor demonstrate putting on the tourniquet while going over the slides.
One-Handed Application to Arm Step 2: Pull the Self-Adhering Band tight and securely fasten it back on itself.	One-Handed Application to Arm Step 2: Pull the Self-Adhering Band tight and securely fasten it back on itself.	Be sure to take up all the slack and pull it as tight as possible.

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
One-Handed Application to Arm Step 3: Adhere the Band tightly around the arm. Do not adhere the band past the clip.	One-Handed Application to Arm Step 3: Adhere the Band tightly around the arm. Do not adhere the band past the clip.	Point of emphasis: the velcro band must be pulled as tight as possible before starting to crank the windlass.
One-Handed Application to Arm Step 4: Twist the Windlass Rod until bleeding has stopped.	One-Handed Application to Arm Step 4: Twist the Windlass Rod until bleeding has stopped.	Read text.
One-Handed Application to Arm Step 5: Lock the Windlass Rod in place with the Windlass Clip TM .	One-Handed Application to Arm Step 5: Lock the Windlass Rod in place with the Windlass Clip TM .	The Windlass Clip keeps the rod from spinning and allowing the tourniquet to loosen.
One-Handed Application to Arm Hemorrhage is now controlled.	One-Handed Application to Arm Hemorrhage is now controlled.	Just this simple sequence of steps could have saved 2500 lives in Vietnam.
Step 6: Adhere the Self-Adhering Band over the Windlass Rod – for small extremities, continue adhering the band around the extremity.	One-Handed Application to Arm Step 6: Adhere the Self-Adhering Band over the Windlass Rod – for small extremities, continue adhering the band around the extremity.	

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Step 7: Secure the Windlass Rod and Self-Adhering Band with the Windlass Strap – grasp the Windlass Strap and pull it tight, adhering it to the opposite hook on the Windlass Clip	One-Handed Application to Arm Step 7: Secure the Windlass Rod and Self-Adhering Band with the Windlass Strap – grasp the Windlass Strap and pull it tight, adhering it to the opposite hook on the Windlass Clip	The tourniquet has now been successfully applied.
Combat Application Tourniquet® Arm Application C-A-Tourniquet Arm Application	Combat Application Tourniquet® Arm Application	Play video This video shows self-application to an arm.
Combat Application Tourniquet ® Leg Application	Combat Application Tourniquet ® Leg Application	Play video This video shows self-application to a leg.
Other Tourniquets SOF Tactical Tourniquet Emergency Military Tourniquet	Other Tourniquets • SOF Tactical Tourniquet • Emergency Military Tourniquet	These tourniquets were also found to be effective and recommended in a study by the U.S. Army Institute of Surgical Research. The SOF Tactical Tourniquet may work better for individuals with very large thighs. The EMT tourniquet is more often found in Emergency Departments.

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Tourniquets – Kragh et al Annals of Surgery 2009 - Ibu Sina Hospital, Baghdad, 2006 - Tourniquets are saving lives on the battlefield - Better survival when tourniquets were applied - BEFORE casualties were into shock - Estimated 31 lives saved in this shock - Stimated 31 lives saved in the hospital rather than in the ED	Tourniquets – Kragh et al Annals of Surgery 2009 • Ibn Sina Hospital, Baghdad, 2006 • Tourniquets are saving lives on the battlefield • Better survival when tourniquets were applied BEFORE casualties went into shock • Estimated 31 lives saved in this study by applying tourniquets prehospital rather than in the ED	Follow-up to previous tourniquet study Most important – apply tourniquets ASAP when needed Survival improved if shock prevented
Tourniquets – Kragh et al Journal of Trauma 2008 Combat Support Hospital in Baghdad 232 patients with tourniquets on 309 limbs CAT was best field tourniquet No amputations caused by tourniquet use Approximately 3% transient nerve palsies	 Tourniquets – Kragh et al Journal of Trauma 2008 Combat Support Hospital in Baghdad 232 patients with tourniquets on 309 limbs CAT was the best field tourniquet No amputations caused by tourniquet use Approximately 3% transient nerve palsies 	Remember at the start of the GWOT, we were still losing casualties to extremity hemorrhage. We're doing much better now This study documented 232 LIVES SAVED in this ONE hospital in a ONE-YEAR period. MINIMAL complications from tourniquet use.
Examples of Extremity Wounds That Do NOT Need a Tourniquet Use a tourniquet ONLY for severe bleeding	Examples of Extremity Wounds That Do NOT Need a Tourniquet Use a tourniquet ONLY for severe bleeding	Neither wound is life threatening - bleeding is minimal. A tourniquet should <u>not be used</u> on these two wounds or other wounds like them where the bleeding is not severe.

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
60	Tourniquet Mistakes to Avoid!	These are common mistakes made by
Tourniquet Mistakes to Avoid! Not using one when you should Using a tourniquet for minimal bleeding Putting it on too proximal Not taking it off when indicated during TFC Taking it off when the casualty is in shock or has only a short transport time to the hospital Not making it tight enough – should eliminate the distal pulse Not using a second tourniquet if needed Waiting too long to put the tourniquet on Periodically loosening the tourniquet on Periodically loosening the tourniquet to allow blood flow to the injured extremity These lessons learned have been written in blood.*	 Not using one when you should Using a tourniquet for minimal bleeding Putting it on too proximal Not taking it off when indicated during TFC Taking it off when the casualty is in shock or has only a short transport time to the hospital Not making it tight enough – should eliminate the distal pulse Not using a second tourniquet if needed Waiting too long to put the tourniquet on Periodically loosening the tourniquet to allow blood flow to the injured extremity * These lessons learned have been written in blood. * 	first responders applying tourniquets.
Tourniquet Pain Tourniquets HURT when applied effectively Does not necessarily indicate a mistake in application Does not mean you should take it off! Manage pain per TCCC Guidelines	 Tourniquet Pain Tourniquets HURT when applied effectively Does not necessarily indicate a mistake in application Does not mean you should take it off! Manage pain per TCCC Guidelines 	It is expected that tourniquet application will cause some pain, but it will also save your casualty's life.
Questions?	Questions?	

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Tourniquet Practical	Tourniquet Practical	For practical exercise: Break up into groups of 6 or less students per instructor Use skill sheets in the TCCC curriculum that apply to each practical exercise
Hemorrhage Control Some wounds are located in places where a tourniquet cannot be applied, such as: Neck - Axilla (ampit) - Groin The use of a hemostatic agent (e.g., Combat Gauze) is generally not tactically feasible in CUF because of the requirement to hold direct pressure for 3 minutes.	 Hemorrhage Control Some wounds are located in places where a tourniquet cannot be applied, such as: Neck, axilla (armpit), groin The use of a hemostatic agent (e.g., Combat Gauze) is generally not tactically feasible in CUF because of the requirement to hold direct pressure for 3 minutes. 	BUT the casualty may get to cover and hold direct pressure over his wounds as part of self-aid.
Airway – Will Cover in TFC No immediate management of the airway is anticipated while in the Care Under Fire phase. Don't take time to establish an airway while under fire. Defer airway management until you have moved casualty to cover. Combat deaths from compromised airways are relatively infrequent. If casualty has no airway in the Care Under Fire phase, chances for survival are minimal.	Airway – Will Cover in TFC No immediate management of the airway is anticipated while in the Care Under Fire phase. • Don't take time to establish an airway while under fire. • Defer airway management until you have moved casualty to cover. • Combat deaths from compromised airways are relatively infrequent. • If casualty has no airway in the Care Under Fire phase, chances for survival are minimal.	We will address airway in the Tactical Field Care phase.

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
C-Spine Stabilization Penetrating head and neck wounds do not require C-spine stabilization. - Gunshot wounds (GSW), shrapnel - In penetrating trauma, the spinal cord is either already compromised or is in relatively less danger than would be the case with blunt trauma.	C-Spine Stabilization Penetrating head and neck wounds do not require C-spine stabilization. • Gunshot wounds (GSW), shrapnel • In penetrating trauma, the spinal cord is either already compromised or is in relatively less danger than would be the case with blunt trauma.	In studies from the Vietnam conflict, of those casualties with penetrating neck trauma, only 1.4% would have benefited from C-spine stabilization. C-spine stabilization takes 5-6 minutes even for experienced medical providers. This is too much time to spend in the Care Under Fire Phase on an intervention that is not proven to be necessary
C-Spine Stabilization Blunt trauma is different! Neck or spine injuries due to falls, fast-roping injuries, or motor vehicle accidents may require C-spine stabilization. Apply only if the danger of hostile fire does not constitute a greater threat.	C-Spine Stabilization Blunt trauma is different! Neck or spine injuries due to falls, fast-roping injuries, or motor vehicle accidents may require C-spine stabilization. Apply only if the danger of hostile fire does not constitute a greater threat.	Do not provide C-spine stabilization if the danger of hostile fire constitutes a greater threat in the judgment of the medic.
Summary of Key Points Return fire and take cover! Direct or expect casualty to remain engaged as a combatant if appropriate. Direct casualty to move to cover if able. Try to keep the casualty from sustaining additional wounds. Get casualties out of burning vehicles or buildings.	 Summary of Key Points Return fire and take cover! Direct or expect casualty to remain engaged as a combatant if appropriate. Direct casualty to move to cover if able. Try to keep the casualty from sustaining additional wounds. Get casualties out of burning vehicles or buildings. 	Ask questions to cover key points
Summary of Key Points Airway management is generally best deferred until the Tactical Field Care phase. Stop life-threatening external hemorrhage if tactically feasible. - Use a tourniquet for hemorrhage that is anatomically amenable to tourniquet application Direct casualty to control hemorrhage by selfaid if able.	 Summary of Key Points Airway management is generally best deferred until the Tactical Field Care phase. Stop life-threatening external hemorrhage if tactically feasible. Use a tourniquet for hemorrhage that is anatomically amenable to tourniquet application. Direct casualty to control hemorrhage by self-aid if able. 	Ask questions to emphasize

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Questions?	Questions?	
Scenario Based Planning If the basic TCCC combat trauma management plan for Care Under Fire doesn't work for your specific tactical situation – then it doesn't work. Scenario-based planning is critical for success. Incorporate likely casualty scenarios into unit mission planning! The following is one example.	 Scenario Based Planning If the basic TCCC combat trauma management plan for Care Under Fire doesn't work for your specific tactical situation – then it doesn't work. Scenario-based planning is critical for success. Incorporate likely casualty scenarios into unit mission planning! The following is one example. 	The TCCC guidelines are not a rigid protocol. Nothing in combat is. Think on your feet!
Convoy IED Scenario	Convoy IED Scenario	Explain to students that this scenario starts here in CUF and is continued throughout the course at the end of TFC and TE. Let's take a scenario that's very common in Iraq and Afghanistan. Does everyone know what IED stands for? Improvised Explosive Device Very common cause of injury in Iraq.
Convoy IED Scenario • Your element is in a five vehicle convoy moving through a small Iraqi village. • Command-detonated IED explodes under second vehicle. • Moderate sniper fire • Rest of the convoy is suppressing sniper fire	 Convoy IED Scenario Your element is in a five-vehicle convoy moving through a small Iraqi village. Command-detonated IED explodes under second vehicle. Moderate sniper fire Rest of the convoy is suppressing sniper fire 	Read text in action sequence

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
Convoy IED Scenario • You are a medic in the disabled vehicle • Person next to you has bilateral mid-thigh amputations • Heavy arterial bleeding from the left stump • Right stump only has mild oozing of blood	Convoy IED Scenario • You are a medic in the disabled vehicle • Person next to you has bilateral mid-thigh amputations • Heavy arterial bleeding from the left stump • Right stump has only mild oozing of blood	Read text in action sequence
Convoy IED Scenario Casualty is conscious and in moderate pain Vehicle is not on fire and is right side up You are uninjured and able to assist	Convoy IED Scenario Casualty is conscious and in moderate pain Vehicle is not on fire and is right side up You are uninjured and able to assist	Read text in action sequence
Convoy IED Scenario First decision: • Return fire or treat casualty? - Treat immediate threat to life - Why? • Rest of convoy providing suppressive fire • Treatment is effective and QUICK • First action? - Tourniquet on stump with arterial bleed	Convoy IED Scenario First decision: Return fire or treat casualty? Treat immediate threat to life Why? Rest of convoy providing suppressive fire Treatment is effective and QUICK First action? Tourniquet on stump with arterial bleed	Read text in action sequence Ask individuals in audience to answer questions
Convoy IED Scenario Next action? Tourniquet on second stump? Not until Tactical Field Care Phase Not bleeding right now Next actions? Drag casualty out of vehicle and move to best cover Return fire if needed Communicate info to team leader	Convoy IED Scenario Next action? • Tourniquet on second stump? • Not until Tactical Field Care Phase • Not bleeding right now Next actions? • Drag casualty out of vehicle and move to best cover • Return fire if needed • Communicate info to team leader	Read text in action sequence Ask individuals in audience to answer questions

SLIDE	INSTRUCTIONAL POINTS	INSTRUCTOR NOTES
78 Questions?	Questions?	Scenario is continued in Tactical Field Care.